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AUTHOR Hershey, Alan M.; And Others
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ABSTRACT

This report presents the first product of a comprehensive 5-year evaluation of a major federal effort, the School-to-Work Opportunities Act (1994), which provides 5-year federal grants as "seed money" to design systems involving work-based learning, school-based learning, and connecting activities. The report is based on extensive site visits in 8 states and 16 communities, and a survey of a representative sample of high school seniors in the same 8 states. This initial evaluation effort has resulted in 12 conclusions, such as: (1) School-to-Work (STW) has generated considerable interest and effort among educators and employers; (2) states have begun building a system by creating employer incentives, promoting career development models, and providing technical assistance to local partnerships; and (3) two of the eight states visited (Kentucky and Oregon) have made STW reforms a central part of the state's more general school reform agenda affecting all students. Individual sections of the executive summary address: the vision of a STW system, evaluation of STW implementation, state approaches to STW implementation, approaches to career development, changes in curriculum (school-based learning and students' work-based activities), large scale participation in diverse STW activities, making local partnerships work, and emerging issues for the future. (CSB)

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PARTNERS IN PROGRESS: EARLY STEPS IN CREATING SCHOOL-TO-WORK SYSTEMS

EXECUTIVE SUMMARY

April 1997

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PARTNERS IN PROGRESS: EARLY STEPS IN CREATING SCHOOL-TO-WORK SYSTEMS

EXECUTIVE SUMMARY

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Authors:

Alan M. Hershey
Paula Hudis
Marsha Silverberg
Joshua Haimson

Submitted to:

U.S. Department of Education
Planning and Evaluation Service
600 Independence Ave., SW
Room 4103
Washington, DC 20202

Project Officer:
David Goodwin

Submitted by:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393
(609) 799-3535

Project Director:
Alan M. Hershey

EXECUTIVE SUMMARY

Many Americans feel that our system of education often fails to prepare youth for careers and employment. Too many young Americans drop out of high school, many who graduate lack marketable skills and go no further in their education, and even many who go on to postsecondary education do so with little sense of career direction to guide their educational choices. For many students, what they learn in school appears to have little relevance to the "outside world." As global competition sharpens and well-paid employment increasingly requires sophisticated skills, failing to prepare youth for the future jeopardizes their well-being and our nation's economic strength.

This report is the first product of a comprehensive evaluation of a major federal effort to respond to these concerns--the School-to-Work Opportunities Act. The report presents a description of very early steps in implementing this initiative, as a baseline for later judgments of its success in changing how American youth are prepared for the future.

The School-to-Work Opportunities Act: Funding for State and Local Implementation

The School-to-Work Opportunities Act of 1994 (STWOA) provides five-year federal grants as "seed money" to help states implement school-to-work (STW) "systems." These systems are to involve broad collaboration at the state level among employers, organized labor, educators, and public agencies responsible for economic and workforce development, education, and human services. By late 1996, federal funding totaling $643 million had been provided to 8 states in 1994, 19 in 1995, and 10 more in late 1996.

Much of the STWOA funding flows to local partnerships. Partnerships are required under the STWOA to include employers, educators, labor representatives, and students and may also include a wide range of other public agencies and community groups. Most local funding is in the form of grants awarded by states out of their federal grants, but the federal government also funds some local partnerships directly. By July 1996, there were 875 local partnerships in the first 27 states with implementation grants that had received either substate grants or direct federal grants. Federal grants had also been made directly to an additional 30 local partnerships in other states, and to a total of 26 organizations serving Native Americans or youth in urban and rural high-poverty areas. Further grants from the $1.095 billion appropriated by Congress are likely to be awarded.

The Vision of a School-to-Work System

The STWOA and proponents of this initiative envision a coherent system of connected programs built in part on foundations created by earlier initiatives such as Tech-Prep, career academies, cooperative education, and Goals 2000. The Act encourages partnerships to build the following key elements of a STW system:

- ***School-Based Features.*** "Career majors" that students choose by 11th grade, combining academic and vocational instruction that meets high standards, linking high school to related

postsecondary programs, and including conscious strategies for introducing students to all aspects of a broadly defined industry

- ***Work-Based Learning.*** Opportunities for students to get work experience and training coordinated with their school-based studies

- ***Connecting Activities.*** Recruiting employer partners, matching students with workplace opportunities and mentors, and helping schools and employers to fulfill their roles and strengthen their collaboration

- ***Career Development.*** Activities in schools and workplaces to help students become aware of their interests and strengths, learn about career options, formulate goals, and make choices wisely to ensure that their studies provide a foundation for further education and a future career

The aim of the STWOA is to do more than enhance specific targeted programs that improve school curriculum, provide workplace experience, or help students understand careers. It aims to ensure that all students have access to a coherent combination of these activities in a gradual progression toward more focused personal goals and advanced skills. The focus is on building sustainable systems of connected programs with consistent policies that promote broad participation.

The Evaluation of School-to-Work Implementation

The STWOA mandates a national evaluation. The five-year evaluation is being conducted by Mathematica Policy Research, Inc., and its subcontractors MPR Associates, Inc., and Decision Information Resources, Inc. The evaluation, which is being performed under contract to the U.S. Department of Education, with support from the national STW office and the U.S. Department of Labor, has the following main features:

Evaluation Questions	Evaluation Components
Have states and local partnerships created ***coherent STW systems*** of connected, sustainable practices and programs?	***Survey of all local partnerships*** in late 1996, 1997 and 1999
How do STW systems ***change what students do*** at the elementary and secondary education levels?	***In-depth case studies*** of eight states and a sample of 39 local partnerships in 1996, 1997, and 1999
How do ***postsecondary paths*** change as STW systems are developed?	***Survey of students*** in the same eight states, including 12th-grade surveys in 1996, 1998, and 2000, and postsecondary followup
Are the activities and practices promoted by the STWOA adopted on a ***wide scale?***	***Analysis of high school transcripts*** for the student survey sample, to determine which segments of the student population participate in STW activities

This first report focuses on the eight in-depth study states: Kentucky, Massachusetts, Michigan, Oregon, Wisconsin, Florida, Maryland, and Ohio. The states were selected because they include a wide range of urban and rural partnership settings at different stages of development. The first five states received STW grants in 1994, but the last three received their grants in late 1995, and had thus just begun STW implementation efforts in 1996 when the first evaluation data were collected. While this report focuses on these eight states, later evaluation reports will draw on data from the local partnership survey for all states with STW grants.

The report draws on two sources: (1) the first case study site visits in spring 1996; and (2) the first student survey, of a representative sample of all 12th graders in STW partnerships in the eight states.[1] Case study site visits provide a wealth of detailed information about approaches to STW implementation, plans being developed, successes and challenges encountered, and the views and insights of employers, school and college administrators, faculty, and counselors, students, parents and labor representatives. Findings based on case study visits are the result of careful analysis and interpretation of what we hear from such respondents and what we observe, but the nature of the data collection precludes quantitative analysis and tallies of every phenomenon. The student survey, in contrast, provides a basis for quantitative estimates of the percentages of students in STW partnership schools who have engaged in particular activities.

Both the case studies and the student survey provide information about only the eight in-depth study states. Although the progress observed and issues identified in these states are likely to be similar to experiences in other states, the eight states are not in any formal statistical sense representative of other states' experiences. Later evaluation reports based on the local partnership survey will draw on data from all 27 states that had received federal implementation grants by fall 1995.

As these implementation efforts evolve, the evaluation will focus on whether a STW *system* is emerging. Over the longer term, we will assess progress towards creation of a STW system by the *consistency* between state STW policy and other education and workforce policies, the *continuity* achieved in innovative program features, the *connectedness* of activities available to students, the *breadth and diversity* of student participation, and the *sustainability* of the institutional relationships forged by STW partnerships. At this stage, our main findings on early implementation efforts are shown in Table 1.

STATE APPROACHES TO STW IMPLEMENTATION (Chapter II)

States are expected to be instrumental in building STW systems. The expectation in the STWOA is that they will create a statewide STW infrastructure including high-level governance and administrative support, statewide marketing of STW concepts, training and technical assistance for local partnerships, curriculum models, a skill certification process, and labor market information.

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[1]This first report focuses primarily on students of high school age, their experiences, and how STW partnerships are working to change them. STW reforms also affect elementary and middle schools, and often involve alternative education providers serving out-of-school youth. Future reports will give greater attention to these topics.

TABLE 1

SUMMARY OF EARLY FINDINGS FOR IN-DEPTH STUDY STATES: FIRST STEPS TOWARD SCHOOL-TO-WORK SYSTEMS

1. The School-to-Work Opportunities Act has set in motion widespread efforts to change education and the way that employers and educators collaborate. Educators and employers alike in large numbers are excited about the prospects for linking school and workplace learning to prepare students better for successful careers.

2. States have begun building a system infrastructure by creating employer incentives, promoting career development models, facilitating college enrollment, and defining target career clusters. Only one of the eight states has so far done all of these.

3. STW concepts have been made a central element of broader education reform in two of the eight in-depth study states. In some other states, STW priorities are, at this early stage, peripheral to other education reforms.

4. The most widely available aspect of STW components is those activities designed to improve students' career awareness . At this early stage, however, few schools deliver a coherent career development sequence.

5. Changes in school curriculum (such as career majors and integrating academic and vocational instruction) so far are a lower priority than career development or workplace activities.

6. Many local partnerships are concentrating early efforts on promoting workplace activity. There are difficult obstacles to overcome, however, in efforts to expand the scale of structured, extended activities linked to the school curriculum as envisioned in the STWOA.

7. Student participation in some specific STW activities is already common, but few students so far participate in a full range of STW activities. In the baseline cohort of 1996 seniors, two percent had taken part in a variety of career development activities, school-based career majors, and workplace activity linked to high school curriculum. (Follow-up surveys will be used to report on postsecondary education and skill certification.)

8. A widespread set of local partnerships has been created. At this early stage of development, most partnerships have taken just modest steps towards creating common policies and practices, spanning multiple school districts and employers. The long-term role of local partnerships as important institutions is likely to depend on developing functions that schools and employers value enough to support after federal funding expires.

States have all taken steps to create a statewide infrastructure, but these efforts are just beginning and no state's work is yet comprehensive or complete. We found five features that the eight states have created in building a statewide system, although only one state has adopted all of them, as shown in Table 2. Some features originate in STW implementation strategies, and some in other education initiatives.

TABLE 2

Early Features of State STW Infrastructure	FL	KY	MD	MA	MI	OH	OR	WI
Incentives for Employer Participation: Tax Credits or Wage Subsidies for Hiring Youth Apprentices					X		X	X
Comprehensive Career Development Models for Age-Appropriate Activities in Elementary, Middle, and High School Years	X	X	X			X	X	X
New Secondary-Postsecondary Links: Easing Transfer from Two-Year to Four-Year Institutions, or Aligning College Admission Criteria With High School Assessments				X			X	
Defined Career Clusters: Identification of Industries as Focus for STW Career Pathways/Majors/Strands		X	X	X			X	X
State Technical Assistance to Local Partnerships	X	X	X	X	X	X	X	X

Two of the eight states have made their STW reforms consistent with and a central part of a general school reform agenda. Oregon and Kentucky are implementing major education reforms that preceded the STWOA but already incorporated some key STW features like career majors and career development. Education reform in Massachusetts, in contrast, is so far proceeding somewhat independently of STW priorities.

Local partnerships are widespread; many are new and still evolving. The in-depth study states had by mid-1996 created and funded 245 local partnerships. Some are just beginning to work or adjusting to changing circumstances. Michigan has subsumed STW partnerships under Workforce Development Boards (WDBs), and STW partners are still adjusting to new definitions of their roles. Florida is also creating WDBs. Ohio and Massachusetts have made regional alliances or employment boards responsible for technical assistance or oversight of local partnerships, but their roles so far are limited by sparse resources and competing responsibilities. Much is likely to change at the local level over the next few years, because many partnerships are quite new. Some partnerships included in the in-depth studies, in fact, had not yet received an implementation grant at the time of the first site visits in 1996.

School-based and workplace components have received uneven attention at the state level. Most states have focused early efforts more heavily on either expanding workplace activity for students or changing what goes on in schools. In part, their focus reflects choices about where administrative responsibility for STW implementation is placed. For example, in Michigan and Wisconsin, governors have placed STW administration in agencies with broad responsibility for workforce development and have set goals for getting large fractions of high school students into some form of workplace activity, ranging from brief job shadowing to extensive internships or apprenticeships. Maryland and Oregon, in contrast,

are relying more on their departments of education to lead STW implementation, and have focused more on implementing education reform initiatives begun before the STWOA. Ohio and Massachusetts have created independent STW offices, outside of any existing agency, which have suffered to some extent in the early stages of implementation from a lack of clout with line agencies or lack of key resources.

Early state efforts most often build on programs originating in vocational education. Expanding or strengthening youth apprenticeship, co-op education, or Tech-Prep programs is a common early strategy and one that is consistent with the STWOA. This strategy is advantageous because it begins with established models and in some cases high-visibility pilot programs that have benefited in recent years from substantial promotion and employer support. On the other hand, this emphasis sometimes reinforces perceptions among parents and teachers that STW systems are just extensions and improvements of vocational education and thus of limited relevance to students who do not consider themselves vocational students.

APPROACHES TO CAREER DEVELOPMENT (Chapter III)

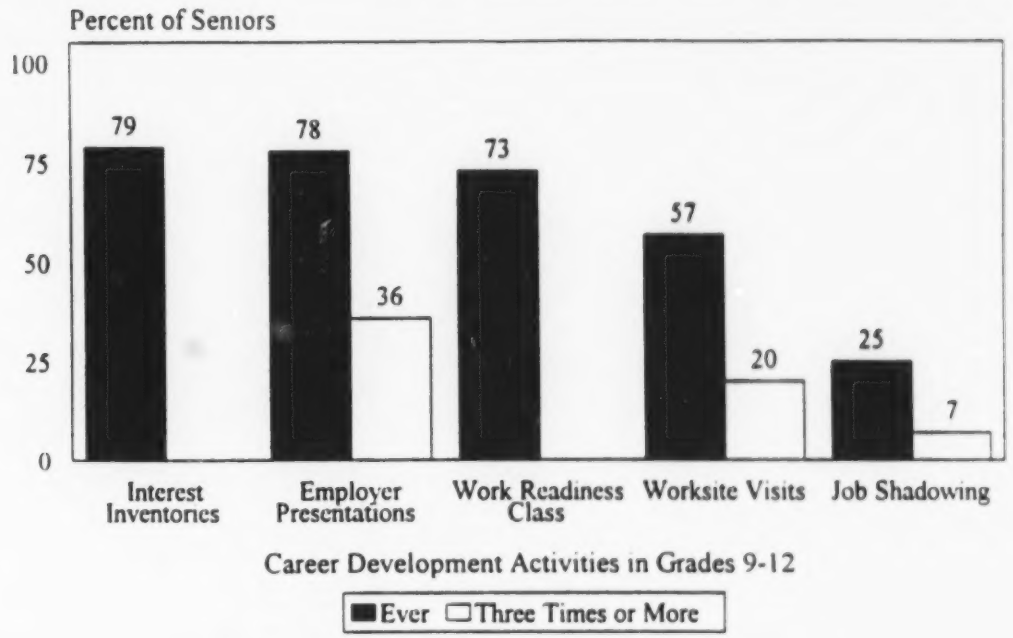
The STWOA promotes activities to help students become aware of careers and explore work environments. These activities include career counseling, interest assessments, career awareness and work-readiness classes or units in academic classes, worksite visits, and job shadowing. Making these activities a systematic part of students' experiences requires overcoming shortages of counseling personnel and expanding the role of counselors beyond the traditional focus on helping students get into college. Making STW systems relevant for all students means that career guidance must take into account a wider range of education and training options and the needs of students of quite different interests and abilities.

Strengthening career development is a natural emphasis for early implementation and, in many states, an extension of efforts begun before the STWOA. Florida, Kentucky, and Wisconsin had made career development a central part of earlier school reforms. Career development activities are emphasized for several reasons. They can help students select their high school courses, choose a career major where that option exists, and decide what workplace activity to pursue. Parents generally see career development activities as useful for all students, rather than a form of "tracking." Schools can strengthen some career awareness and exploration activities on their own, without waiting for recruitment of large numbers of employer partners. As employers become involved, the forms of workplace activity they can most readily offer are student visits and brief job shadowing, which serve career awareness purposes.

To overcome resource constraints and strengthen career development, schools are changing the delivery of guidance services. To multiply the effect of their work, counselors are becoming consultants to other school staff, organizing and overseeing career development services and activities rather than doing all the work themselves. Counselors are more commonly managing career centers where students do self-directed interest assessments and research on careers, using new software products. Teachers in some sites have been enlisted and trained as auxiliary advisers to students. Career awareness units commonly are incorporated into English or social studies classes taught by academic teachers.

Participation in career development activities is high. Among seniors in the 1996 baseline cohort in the in-depth study states, the student survey showed that almost 80 percent had at some time in high school completed interest inventories, more than half had gone on a worksite visit with a school group, and about a quarter had done job shadowing at least once (Figure 1). About 63 percent of all seniors could

FIGURE 1
PARTICIPATION IN CAREER DEVELOPMENT ACTIVITIES



SOURCE: 1996 survey of 12th graders conducted by Mathematica Policy Research, Inc.

be described as having a comprehensive set of career development activities, in that they reported having met at least four of five participation criteria. These five criteria include talking to school staff about career plans[2] and four other "activity criteria": (1) completing an interest inventory, (2) attending talks by employers at their school, (3) taking a workplace readiness class and (4) going on either a worksite visit *or* a job shadow organized by their school.

For individual students, however, career development activities are typically occasional and unconnected. Many partnerships are emphasizing broad participation in job shadowing, but the intense organizational effort required to get a large number of students to a workplace so far has limited attention to making the experience part of a coherent sequence. In the 1996 site visits, there were few examples found where various activities--interest inventories, worksite visits, and job shadowing--are linked coherently for individual students in a progression of more focused exploration.

[2]About 87 percent of the 1996 seniors had talked to teachers, counselors, or other staff about careers (not shown in Figure 1).

RESHAPING CURRICULUM: CHANGES IN SCHOOL-BASED LEARNING (Chapter IV)

The STWOA promotes several approaches to organizing and delivering school-based curriculum that, in their most ambitious forms, could reshape high school environments, how students plan their studies, and how students' performance is assessed. Three elements are stressed in the legislation:

1. ***Career Majors.*** Career-focused programs of study, or "career majors," are expected to engage students in course sequences designed as purposeful steps toward postsecondary employment or further education and, ultimately, toward a broad career goal.

2. ***Curriculum Integration.*** Academic education and vocational education are to be integrated, combining the best practices of both.

3. ***Skill Standards.*** Challenging specifications of the skills students need to master to enter particular careers are to be incorporated into academic and technical instruction, and high academic standards are to be applied to all students.

Career majors are a lower early priority than other STW components in most states and local partnerships. Two of the in-depth study states (Oregon and Wisconsin) have set goals for student participation in career-focused programs of study whereas four have established goals for participation in work-based learning. Career majors are a lower priority for three reasons. Schools have already had considerable experience with career development and forms of work-based activity, and they naturally focus early efforts on components that have an existing foundation. Career majors represent a substantial departure from most schools' practices and often are perceived as tangential to education reforms that focus on academic performance and school accountability. The concept of career-focused programs of study is often associated with vocational education; parents and students often see them as reducing options for postsecondary study.

Selecting a career focus rarely determines students' high school studies. In some partnership schools, students are asked to express tentative career interests in ninth grade, and counselors may as a result suggest course electives. Other schools prepare lists or tables showing suggested academic and technical courses for students interested in various career areas, and counselors use them as a resource in guiding students' course choices. The most fully developed career major is a defined program of study; students who choose a broad career area are in effect choosing a sequence of courses. Students in such programs of study are often clustered in some key classes (such as math and a vocational course) to maximize opportunities for tailoring curriculum to career interests and for blending technical and theoretical instruction. These programs of study are the least prevalent of the "career focus" models.

Student involvement in defined programs of study that integrate academic and vocational curriculum was relatively uncommon for the 1996 baseline cohort. A large fraction (43 percent) of 1996 seniors in the eight states' partnerships had expressed a career interest in response to a query by school staff. However, only 17 percent of seniors had ever taken an English, math, or science course specifically designed for students with their career interest. About 12 percent reported they had ever had an assignment in such a class concerning the career area they had chosen. The case study site visits

identified some career-focused programs of study that may affect this participation rate for later cohorts. So far, these defined programs of study are usually built on existing Tech-Prep, youth apprenticeship, or career academy programs. They are often organized around specific occupations (such as metalworking or carpentry), rather than around broad career clusters (such as health services or industrial technology).

Integration of academic and vocational instruction is widely pursued, sometimes emphasizing methodology more than challenging content. We distinguish three broad approaches to curriculum integration: (1) incorporating applied forms of instruction and career content into academic classes, to involve students more in problem solving; (2) emphasizing math and communications skills and scientific principles more heavily in vocational courses; and (3) linking academic and vocational instruction through cross-course tasks and projects. "Integration" has become a popular but often vaguely defined objective, and sometimes the aim of creating challenging experiences is overshadowed by enthusiasm for new teaching approaches such as collaborative or project-based earning and hands-on applications. Professional development for teachers on curriculum integration is reaching many teachers; however, it is often brief and allows little time for creating curriculum materials.

Efforts are being made to raise academic and vocational standards, but in most states these efforts are for now somewhat peripheral to STW priorities. In several in-depth study states, efforts to raise academic standards through state reforms emphasizing school accountability and proficiency testing have absorbed the attention of some local schools. This has made it difficult for some of them to focus on STW concepts at the same time. Some national industry skill standards are in use, mostly in specific occupational programs rather than as part of broadly defined career majors.

LEARNING BY WORKING: STUDENTS' WORK-BASED ACTIVITIES (Chapter V)

Work-based activities are widely regarded as an essential STW ingredient: a way to inform students about careers, motivate them to succeed in education, and help them develop skills they will need. Brief job shadowing experiences serve career awareness and motivational purposes. To help students develop general workplace skills and technical skills, however, the STWOA also envisions extended, paid activities combining work experience with instruction related to various aspects of an industry. Worksite activities are to be linked to school curriculum, so students can see how the skills they learn in class are needed in the workplace and have a chance to apply them.

Developing work-based activities is the top priority of most local partnerships. Four in-depth study states have set participation goals, aiming for 50 to 100 percent of all students to have some kind of work-based learning experience. These goals have stimulated local effort. Employer recruitment is often the primary assignment of partnership staff and a major role for employer intermediary groups such as chambers of commerce. Several states have recently established tax credits or wage subsidies to encourage employers to offer intensive workplace opportunities. Later stages of the evaluation will clarify their effects on employer participation.

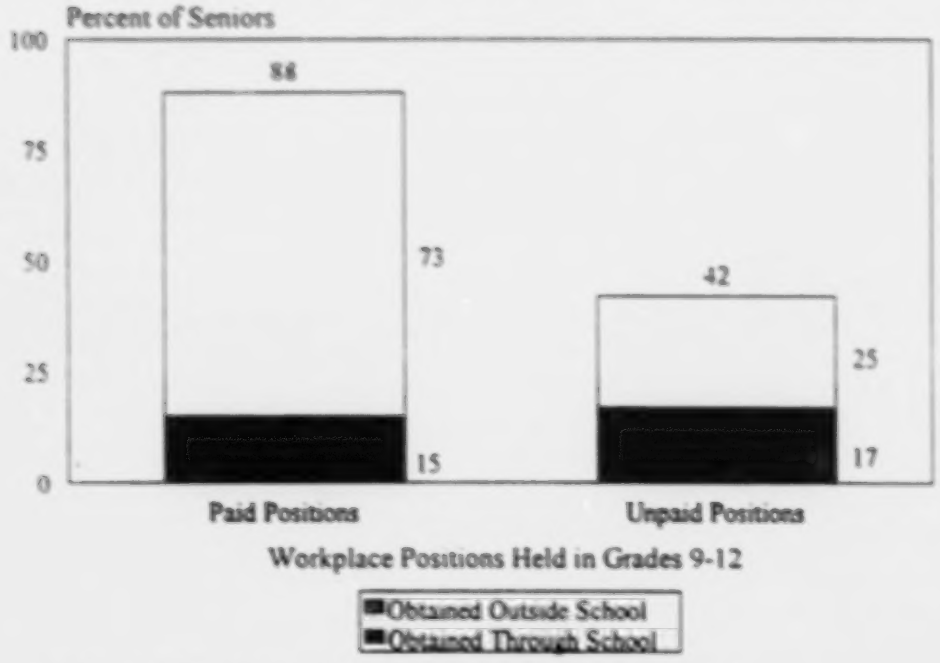
Local constraints typically limit emphasis on paid positions with structured training and work experience—the idealized form of workplace activity emphasized in the STWOA. Graduation requirements and students' after-school schedules often leave little room for such workplace activities through STW programs. Employers like to be selective; even large firms typically accept just a few students. Unions and employers are reluctant to place students in some production environments due to

concerns about safety, liability, and worker displacement. Recruiting enough employers for large numbers of such worksite opportunities, and placing and monitoring large numbers of students, are beyond the capacity of the limited staff available for these tasks in the current stage of STW implementation.

As a result, partnerships are currently giving greater emphasis to other forms of work-based learning. The most attention is given to expanding brief job shadowing. Unpaid internships, training apart from the production setting, and school-based enterprises are also ways that partnerships are pursuing some of the goals of work-based learning while reducing cost and transportation difficulties and avoiding safety, liability, or displacement issues.

At this early stage in STW implementation, partnerships and schools play a relatively modest role in arranging the more intensive workplace activities that students obtain. Many students have jobs and various unpaid workplace experiences, but most obtain them on their own. About 88 percent of the baseline 1996 cohort of seniors in the in-depth study states' STW partnerships had at some point in high school held a paid job, but just 15 percent had ever obtained one through school (Figure 2). About 42

FIGURE 2
PARTICIPATION IN INTENSIVE WORKPLACE ACTIVITIES

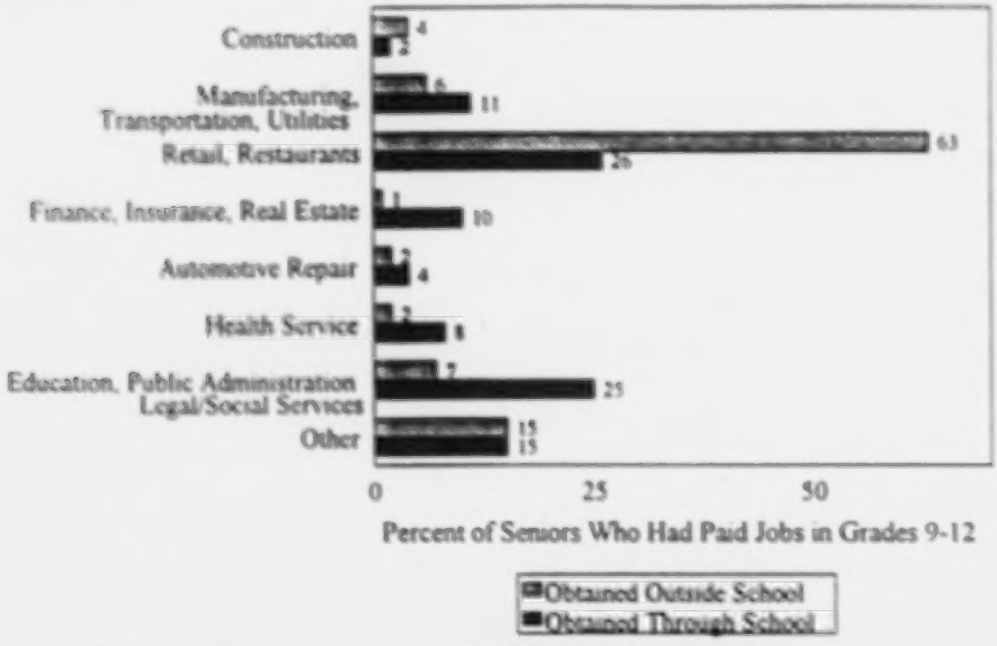


SOURCE: 1996 survey of 12th graders conducted by Mathematica Policy Research, Inc.

percent of the seniors had ever had an internship, volunteer position, or unpaid training; 17 percent of the seniors had found such opportunities through a school program.

Workplace opportunities that students get through school are of higher quality than opportunities they find on their own. Students in the class of 1996 who had found jobs or internships through school had worked in more diverse industries and occupations (Figure 3). They were more likely to work in industries related to their expressed career interests, although achieving this goal is still often a challenge. Students in positions found through school spend more of their time learning and practicing skills as

FIGURE 3
INDUSTRIES IN WHICH STUDENTS HAVE PAID WORKPLACE EXPERIENCES



SOURCE: 1996 survey of 12th graders conducted by Mathematica Policy Research, Inc.

opposed to doing regular production work, and are more likely to get training in a structured classroom or workshop setting.

Some links between school and worksite learning are common, but they are often of limited depth. Of all surveyed seniors in the baseline 1996 cohort who had gotten a paid or unpaid workplace position through school, about half had written an essay or completed a classroom assignment that drew on experiences or skills they had learned in the workplace. However, students who found positions on their own also frequently reported such links. The case study visits suggest that these assignments often make only vague connections to worksite activity--in tasks such as, "Write an essay about your job"--particularly if students are not part of a defined program of study that groups them in academic classes by their career interests. A more thorough link might include, for example, a business class assignment to research ethical standards affecting banking practices for students doing internships in banks. The frequency of more thorough links will be gauged in later student surveys and site visits as implementation continues.

Similarly, integrating assessment of workplace performance into school grades was common for the baseline 1996 cohort, but not necessarily in-depth. Although 58 percent of the students who ever obtained a paid or unpaid position through school said that school staff received some kind of assessment of their worksite performance, only about a quarter of those students said that school and employer staff ever spoke to each other about their performance.

About 16 percent of the 1996 baseline cohort of seniors had participated in what could be described as a "linked workplace activity." These were students in the first survey who had ever (1) held a paid

job or unpaid internship or volunteer work, obtained through school or on their own, (2) completed an assignment in an academic class using information or skills acquired during that work-based activity, and (3) had their performance in that work-based activity count toward a grade at school.

Site visits suggest that students are most likely to be involved in intensive workplace activities with more thorough links to the classroom if they are participating in programs structured around vocational education, such as youth apprenticeships and enhanced co-op education programs.

ENCOURAGING LARGE SCALE PARTICIPATION IN DIVERSE STW ACTIVITIES (Chapter VI)

The vision of a STW system implies more than expanding separate programs and activities designed for particular target groups. The aim instead is to make it possible for a large number of students, with diverse backgrounds and abilities, to have coherently related experiences that help them develop a career goal and begin preparing for it. Thus, an important measure of success in creating a STW system will be the level of participation in a combination of STW activities. Over time, the fraction of students who are "multiple component participants" should grow if STW programs are in fact becoming a STW system. There should also be evidence over time that these participants have varied career interests, educational aspirations, and family and educational backgrounds.[3]

Baseline patterns of student participation in STW components reflect both early implementation priorities and initiatives begun before the STWOA. Broad participation exists in activities that serve career awareness objectives, in part because many states were already promoting comprehensive career development models. The emphasis on workplace activity in early STW implementation has reinforced this pattern by promoting brief job shadowing experiences for large numbers of students. Career majors are a lower priority, and a variety of practical constraints limit expectations expressed by local partnership staff for widespread participation in more extended workplace activities.

There is wide participation in some STW components, but few students in the baseline 1996 cohort had participated in multiple STW activities. Almost two-thirds of 1996 seniors had participated in career development activities (Figure 4). About 12 percent had been involved in something like the career major concept promoted by the STWOA--choosing a career focus for their high school studies, being grouped with other students who have similar career interests, and having classroom assignments related to that career interest. About 16 percent had a "linked workplace activity" that went beyond brief job shadowing or worksite visits. The intersection of these identified groups--the students who had engaged in all three of these components--amounted to two percent of 12th graders in the in-depth study states' STW partnerships.

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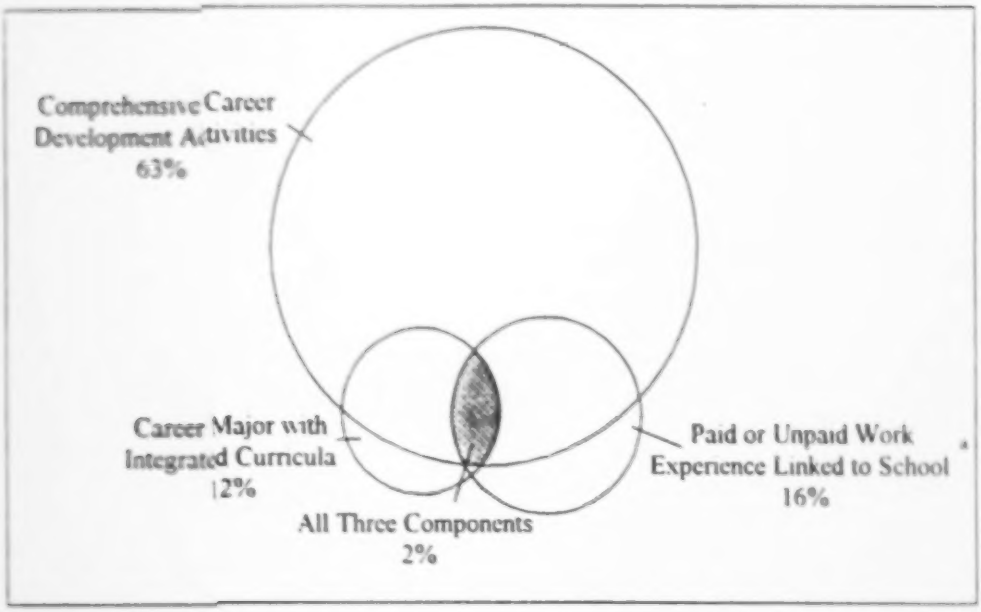
[3]We are collecting students' high school transcripts, and these will provide a basis for analyzing the academic ranking and performance of students who, on the basis of their survey responses, are described as "multiple component" participants. Such analysis will be presented in later reports. Follow-up student surveys will also reveal the relative rates of participation in particular STW activities for students who pursue postsecondary education and those who do not.

FIGURE 4
STUDENT INVOLVEMENT IN KEY STW COMPONENTS


Comprehensive Career Development Activities 63%
Career Major with Integrated Curricula 12%
Paid or Unpaid Work Experience Linked to School 16%
All Three Components 2%

SOURCE: 1996 survey of 12th graders conducted by Mathematica Policy Research, Inc.

[a] Work experience is considered "linked" to school in this analysis if workplace performance counts towards school grades and class assignments draw on the workplace experience.

A low rate of participation in multiple STW components in 1996 is not surprising, for several reasons. First, states typically have set priorities on certain system components, rather than seeking to expand all at once. Second, implementation challenges have so far limited partnerships' and schools' capacity to involve large numbers of students in career majors or intensive workplace activities linked to their school program. Third, most expansion efforts currently are focusing on building the capacity to deliver each component separately. Only in small, targeted, and usually selective programs are local partnerships concentrating their efforts on combining a variety of integrated STW experiences for particular students. The "multiple component participation" rate for 1996 seniors, moreover, was unlikely to be affected by early STW implementation efforts, which are more likely to be affecting the classes of younger students that follow. Follow-up student surveys will also reveal the relative rates of participation in particular STW activities for students who pursue postsecondary education and those who do not. How this rate grows in the 1998 and 2000 student surveys will be an important measure of whether STW systems are gaining strength.

MAKING LOCAL PARTNERSHIPS WORK (Chapter VII)

The STWOA sets forth the premise that local cooperation among institutions and groups concerned about education and employment will help students prepare for future careers. It is assumed that most students need education or training beyond high school, and that cooperation between high schools and postsecondary institutions will increase the number who get it. Ties between employers and schools are

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seen as promoting opportunities for career exploration and workplace learning. Other organizations, such as labor unions, are also considered essential partners.

At this early implementation stage, schools and employers play more active roles than postsecondary institutions in STW partnerships. STW funding is most often funneled through school districts, and secondary school staff are usually most actively involved in planning STW components and working with employers. Postsecondary institutions serve as partnership coordinators in just 6 of the 39 local partnerships in the in-depth study, usually where a community college is building on its earlier role as the hub of a Tech-Prep consortium. In many local partnerships, however, the role of postsecondary institutions remains vaguely defined.

So far, efforts involving postsecondary education that are relevant to STW implementation are focused mostly on promoting college enrollment. Quite independently of its STW strategy, for example, Massachusetts has made it possible for students to get conditional admission to a four-year state campus when they are admitted to a community college, making it easier for them to choose a less expensive two-year program without feeling they are lowering their chances for a bachelor's degree. Oregon is aligning admissions criteria at two- and four-year state colleges with assessments that will be used in awarding Certificates of Advanced Mastery (CAMs) in each career strand or major.

At the local level, the role of postsecondary institutions often focuses on strengthening articulation with high schools. However, most partnership staff acknowledge the long-standing concern that students do not take advantage of articulation in substantial numbers. Many students go to colleges that are not included in articulation agreements or prefer to repeat courses for which they could get transfer credit. Colleges typically have not yet created systematic and reliable procedures to identify students eligible for articulated credits when they matriculate.

Employers are playing active roles in local partnerships. Employers and employer organizations are participating widely in governing boards of local partnerships; in about a quarter of the in-depth study sites employer representatives actually chair these bodies. Employers are increasingly offering varied forms of workplace learning opportunities. They are also often helping schools fulfill their roles more effectively. For example, by hosting teachers and counselors in internships, they help school staff get a clearer grasp of modern career options their students face and help them gather material to use as they develop curricula that relate academic skills to the career contexts in which they are applied.

However, partnerships face a major challenge to recruit large numbers of employers. Hosting students in workplace learning puts strains on employers: fitting them into worksite environments and schedules; accommodating legal restrictions, safety concerns, and union reservations; and absorbing the cost of trainers and mentors. Employer recruiting will have to expand participation manyfold beyond 1996 levels if the goals states are setting for workplace activity are to be realized.

Development of information systems to manage a large workplace component is beginning. As partnerships recruit more employers, it becomes imperative to avoid having individual schools, potentially from multiple districts, burden the same employers with competing requests for workplace slots. It also becomes important to have ready access to information about workplace opportunities and to be able to match them with students' interests, skills, location, and schedule. Interest in employer databases is therefore widespread, but sophisticated efforts to build systems that support these functions are rare so far. In Oregon, partnerships are already implementing ambitious information systems that allow them to keep track of available workplace opportunities and reserve them for students. More commonly, however,

databases are so far designed as simple directories of participating employers, rather than interactive management information tools.

Organized labor is so far playing a limited role at the state and local level. Examples can be found of unions making important contributions, particularly in developing materials to help students learn about the role of unions in the workplace. However, several factors appear to be limiting labor's role. In some places, unions have been reluctant to support youth apprenticeships, for fear they will be confused with formal registered apprenticeship programs. Concern about the potential for displacement of older workers continues to dampen enthusiasm for involving large numbers of students in unionized workplaces. In some partnership areas, there is simply little union presence.

Organized parental involvement is so far uncommon. Partnership boards often include parents of children in local schools, but it appears uncommon for parent organizations to be formally represented. However, parent volunteers are often involved as speakers in classrooms and sometimes help with workplace visits or provide information on postsecondary options. In two of the in-depth study states, there has been organized opposition to the idea of STW systems from a small percentage of parents who object to what they perceive as attempts to force students into particular careers to serve the needs of industry.

The long-term roles and sustainability of local partnerships are not yet clear. STW partnerships often span large areas with numerous school districts and many employers. Wide-area partnerships can be useful by broadening opportunities for students beyond what can be found within a school district. Many are already playing a useful role in identifying needs for professional development and organizing its delivery, and in promoting exchange of ideas and information among partners. In relatively few cases, however, are partnerships so far acting as a catalyst for formulation of consistent policies, procedures, and program models, in large part because of the strong tradition of local control of schools. Many partnerships, of course, are in the process of developing their role and the functions they will perform. Over the next several years, it will become clearer whether partnerships as distinct entities provide something to schools and employers that they cannot do on their own or in simple bilateral relationships.

EMERGING ISSUES FOR THE FUTURE (Chapter VIII)

The long-term place of the school-to-work concept in American education is not yet clear, but the hurdles that must be cleared to accomplish positive, lasting reforms are coming into focus. Many states just began this year to form state-level strategies and encourage STW systems at the local level. Many local partnerships are new and are still working to form a consensus on what STW means and how partners can contribute. Nevertheless, the experience to date suggests five issues whose resolution over the next several years will shape the final conclusions of this evaluation.

Can states fit STW in a coherent policy framework? Will the key components of STW systems as envisioned in the STWOA become central elements of state strategies for education reform and school improvement? STW concepts are central to education reform in Oregon and Kentucky, for example, but more tangentially related or even in competition with education reforms in other states. It also remains unclear how closely STW as an education reform will--or should--be tied to policies for workforce development and training for to adult populations.

Can intensive work-based learning become commonplace? As states and local partnerships begin trying to expand such activity, they are encountering constraints on students' available time, on the number of employers willing to make such positions available, on the resources needed to develop and monitor workplace activity, and on parents' willingness to have their children commit to workplace programs. It remains to be seen how prevalent intensive workplace activities such as internships and youth apprenticeships will become at the high school level.

Can workplace learning be made meaningful to all students? The career focus of most intensive workplace activities may turn some students away, because they and their parents view high school as a time for building a foundation of knowledge and skills, but not for choosing where they will be applied. Yet workplaces could offer opportunities to learn and apply sophisticated skills whose eventual utility to the student may lie in totally unrelated work settings. A major challenge is to create workplace learning opportunities whose value and appeal stem from the intellectual challenges they offer rather than the career areas in which they occur. Such opportunities might be carried out more in schools than in workplaces but use the workplace as a stimulus and "test-bed" for students' practice in data gathering and analysis, and even as an audience for their findings. Some examples of such approaches to linking school and the world of work were found even in this early stage of STW implementation, but it remains a question whether they will become widespread and make up for difficulties in expanding more intensive forms of workplace learning.

Can school curriculum be consistently built around career themes? Two approaches have so far been taken to developing what the STWOA calls career majors: (1) a "program foundation" model, which builds on programs originating in vocational education, like youth apprenticeships; and (2) a "school restructuring" model, in which entire schools are reorganized into houses or academies with broad career themes. Both have strengths and disadvantages. The former builds on popular programs, but so far typically attracts the relatively few students willing to make fairly specific commitments to particular occupations. The latter typically encompasses more broadly defined career areas and holds strong promise for integrating technical and academic studies for a broad range of students. However, it requires revamping whole schools. It is uncertain at this point how widespread either approach will become.

Will STW partnerships become important institutions? As recipients of federally funded grants, local partnerships can be expected to play visible roles in the short term. In the long run, they will be important only if they perform functions that schools, employers, and other partners value and cannot perform satisfactorily on their own. The ultimate question is whether the partnership concept, after the expiration of federal funding, will be supported financially and sustained. Later stages of the evaluation in-depth studies will focus to a large extent on the evolving role of local partnerships, how central they are to partners' vision of the future educational system, and what resources will support that vision.